

Portsmouth Gaseous Diffusion Plant Decontamination and Decommissioning Project Industry Day Briefing March 31, 2008



EM Environmental Management

safety ❖ performance ❖ cleanup ❖ closure

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Welcome

- 1:00-1:15 *Introductions and Logistics* Angela Watmore
- 1:15-1:30 *Opening Remarks* Jack Surash
- 1:30-2:30 *Portsmouth Overview* Bill Murphie
- 2:30-3:15 *D&D Project Overview* Dave Kozlowski
- 3:15-3:30 *Break*
- 3:30-4:00 *Acquisition Strategy* Angela Watmore
- 4:00-5:00 *Proposed M&I Requirements* Judson Lilly
- 5:00 *Conclusion* Kimberly Tate



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Logistics

- No audio or video recording is permitted.
- 3X5 cards are available to submit questions.
- Please submit questions in writing. Box is located at front check-in table or submit in accordance with official procurement website at www.emcbc.doe.gov/pppo_main_site.
- DOE may answer some questions during the briefing today, if time permits; however, all questions will be answered and posted on the official website.
- Briefing slides, tour script, attendee list, and responses to questions will be posted on the website.

Introductions

- *Jack Surash* *Deputy Assistant Secretary
Acquisition and Project Management*
- *William Murphie* *Portsmouth/Paducah Field Manager*
- *David Kozlowski* *Federal Project Director*
- *Judson Lilly* *Deputy Federal Project Director*
- *Angela Watmore* *Acquisition Program Manager*
- *Kimberly Tate* *Contracting Officer*

- *Other IPT Members*
- *Small Business Representatives*
 - *Thomas W. Krusemark, Small Business Administration*
 - *Brenda Degraffenreid, DOE HQ*
 - *Kay Rash, DOE HQ*



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Portsmouth Site Overview

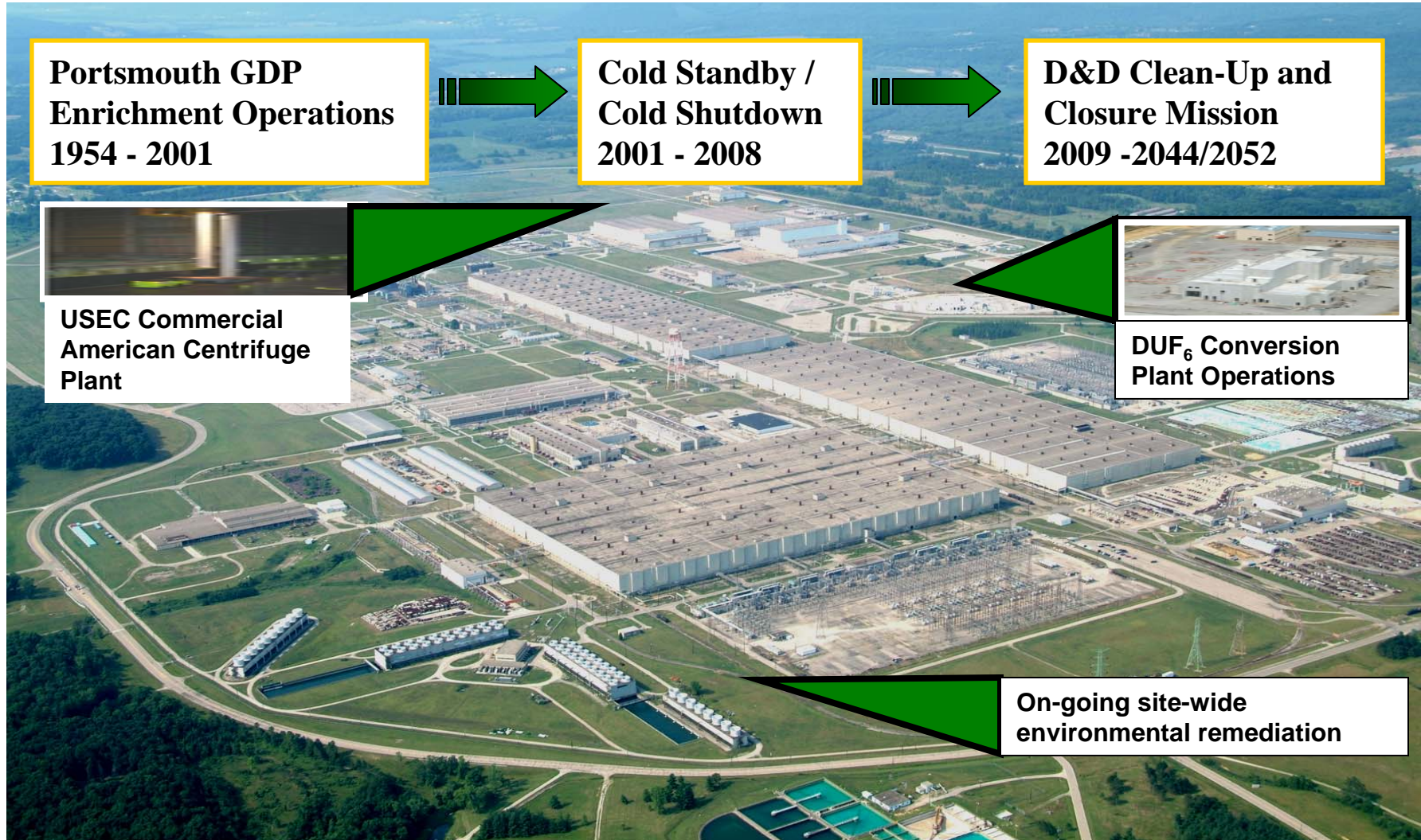
Portsmouth Site Overview



- 3,777-acre federal reservation in rural Pike County.
- Located 75 miles south of Columbus, Ohio
- Largest employer in rural Southern Ohio - 1,900 workers
- 1950s - GDP constructed for purpose of supplying both highly enriched uranium (HEU) and low enriched uranium (LEU) for defense purposes and commercial nuclear fuel sales
- 1989 - USEPA Consent Order and Ohio Consent Decree
- 1991 - produced only LEU for commercial power after 1991
- 1992 EPA Act initiated privatization of DOE's uranium enrichment enterprises
- 1998 - USEC privatized
- 2001 - USEC ceased GDP enrichment operations
- 2001 - Cold Standby initiated
- 2003 - EM Portsmouth Paducah Project Office established
- 2004 - USEC selects Portsmouth for new enrichment technology and American Centrifuge Plant
- 2004 - DUF6 Construction Start
- 2005 - Cold Shutdown initiated
- 2007 - Approval to proceed with D&D acquisitions








Multiple Tenants/Missions Today

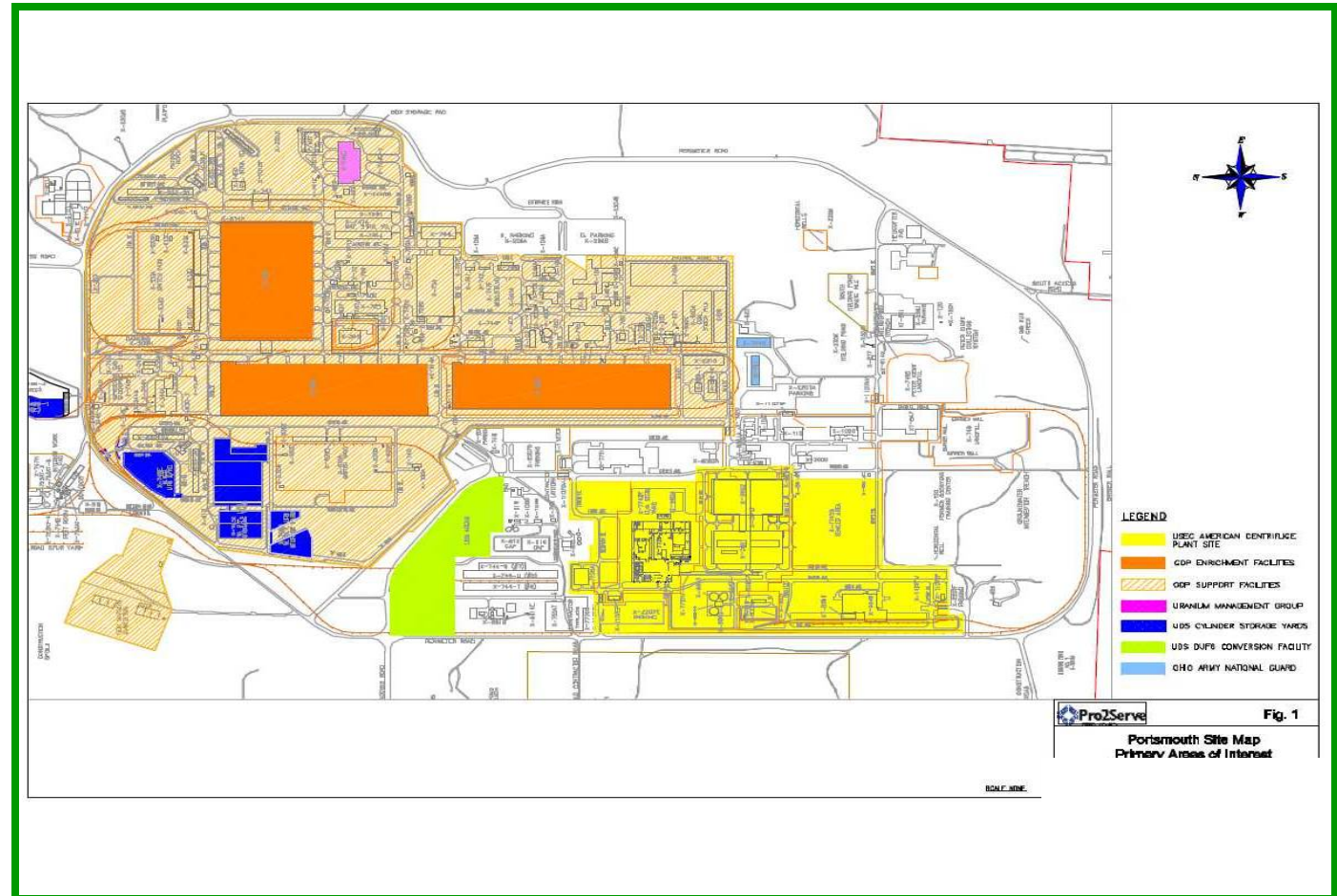


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Shared Land-Use/Infrastructure

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 GDP Buildings/
Support
Facilities
Leased to
USEC
- 
 DOE DUF₆
Cylinder
Yards
- 
 DOE DUF₆
Conversion
Plant
- 
 Facilities leased
for USEC
Centrifuge Plant
- 
 Uranium Management
Center



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Current Mission Contracts/Leases

Contractor/Lessee	Scope of Work	Performance Period End
USEC	Cold Shutdown and limited deactivation services under NRC regulation; deposit removal and surveillance and maintenance of leased GDP facilities	Sep 2008
USEC (MOA)	Decontaminate un-usable uranium feedstock to remove Technetium-99	Oct 2008
USEC (GDP/GCEP Lease)	Various site-wide shared services including: utility and infrastructure services; protective force services; nuclear materials control and accountability; fire and emergency management; utilities; criticality accident alarm system; telecommunications; non-destructive analysis measurements; and records management	Services provided upon request through Work Authorizations
LATA/Parallax Portsmouth (LPP)	Environmental Remediation, limited D&D, waste disposal	Sep 2009
Theta Pro2Serve Management Company (TPMC)	Infrastructure services in unleased portions of site	Mar 2010
Uranium Disposition Services (UDS)	Depleted Uranium Hexafluoride Conversion; construction of conversion facilities and operation	Feb 2011

*** EM administers all contracts. ORO/NE administers the Lease.**

Cold Shutdown Activities

- Cold Shutdown activities include landlord minimum safe operations activities for majority of GDP facilities under Lease from DOE, along with activities to prepare GDP facilities to transition from Cold Shutdown to D&D. Examples include:
 - **X-333 Process Building**
 - Removal of lube oils and pyranol transformer oils
 - Dry pipe fire suppression system installation
 - Final Greater-than-Safe-Mass deposit removed in 2007; all other uranium deposits considered uncomplicated handling
 - **X-330 Process Building**
 - Non-destructive analysis on deposits
 - Dry pipe fire suppression system installation
 - Deposit removal
 - **X-326 Process Building**
 - Non-destructive analysis on deposits
 - **X-533 Switchyard Deactivation**

Technitium – 99 (Tc-99) Cleanup

- Clean cylinders of out-of-specification uranium contaminated with technitium (Tc-99) for reuse by the nuclear industry
- Project began in 2002 and is scheduled to end in 2008
- Over 15,000 metric tons of uranium have been cleaned
- Recovered asset value exceeds \$3.5B



Uranium Management Center

Uranium Management Center

- The Portsmouth site stores surplus, low enriched uranium materials from other DOE sites until these materials can be permanently stored, disposed, reused, or sold
- Approx. 4,500 MTU were received between 1999 and 2002 from DOE's Fernald and Hanford sites and various universities to support closure activities and consolidation.
- An ongoing project is underway for marketing and potential future sales of these materials to private industries.



Depleted Uranium Hexafluoride (DUF_6)

- The DUF_6 Conversion Plant is currently under construction and is scheduled for completion in 2008
- Following a period of testing/operational readiness, the facility will commence operations to convert DOE's large inventory of DUF_6 to a more stable chemical form (oxide) for reuse or disposal
- Conversion of the entire DOE Portsmouth DUF_6 inventory will take approximately 18 years
- The DUF_6 contractor manages the conversion facility and DOE cylinder yards



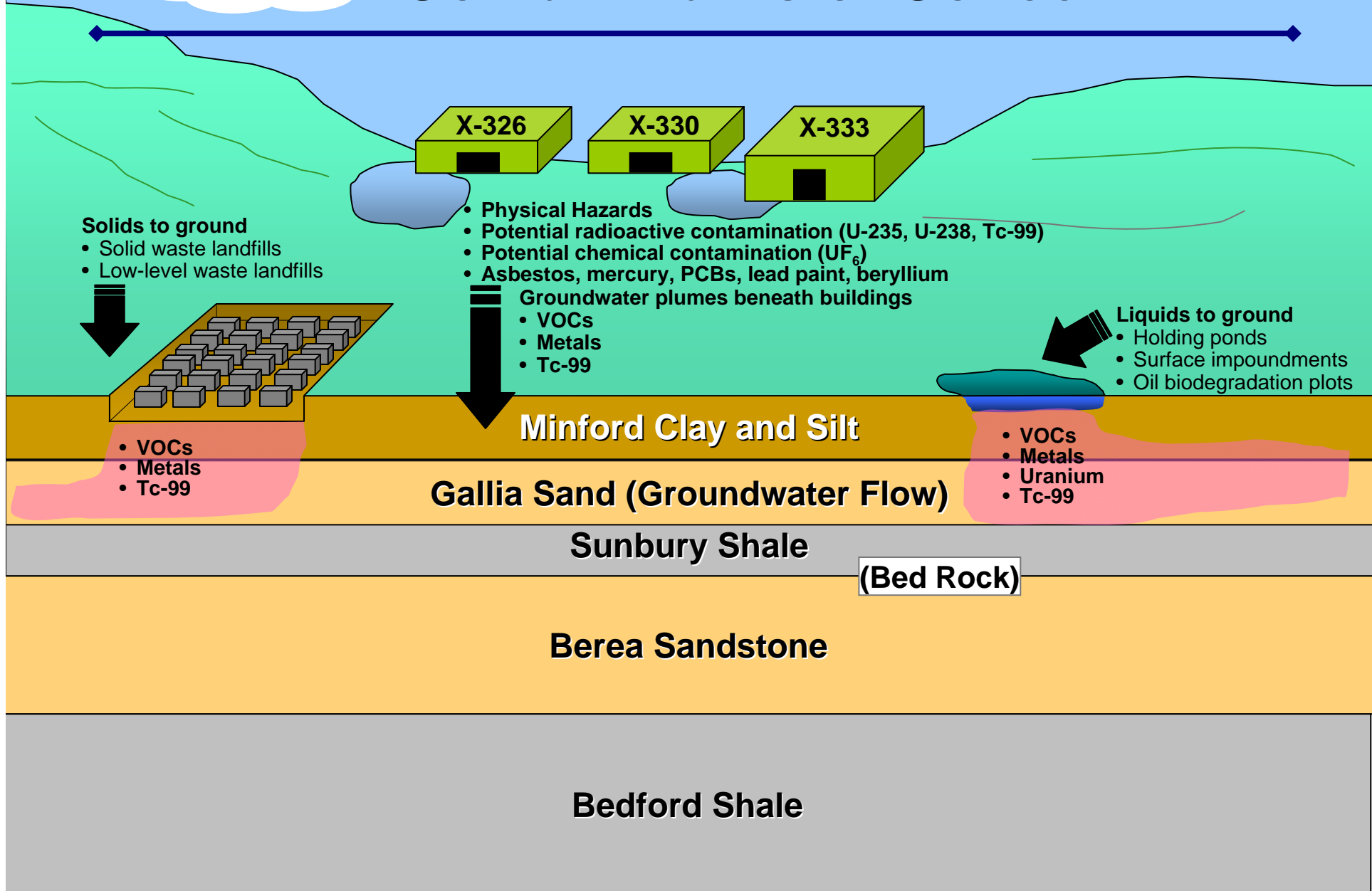
Non-leased Infrastructure Activities

- DOE has a small business contractor that performs non-leased facility infrastructure related activities for non-leased portions of the Site
- **Key Services include:**
 - Grounds Maintenance
 - Roadway/Parking Lot Maintenance
 - Operations and Maintenance of Re-circulating Hot Water Boiler System
 - Facility Surveillance and Maintenance
 - Janitorial Services

Cleanup Activities

- Environmental cleanup program initiated in 1989 under Consent Decree with State of Ohio and Administrative Consent Order with U.S. EPA
- Ohio EPA provides day-to-day regulatory oversight
- To date, DOE has spent over \$1.0 Billion on environmental cleanup - extensive progress has been made to remove waste and reduce overall risk
- Site divided into four quadrants with 160 Solid Waste Management Units
- Of the 160 SWMUs, 105 are currently identified as No Further Action, 14 are in remediation or post-remediation monitoring and surveillance; and 41 are considered “Deferred Units”, which are under or around the GDP facilities.
- DOE is in discussions with its’ regulators concerning a final regulatory framework for the D&D project
- Preliminary end-state vision is industrial re-use, however final end state and specific cleanup requirements will be developed and agreed to through active involvement with the public and regulators

Contaminants of Concern



-
- This map illustrates the X-330 Process Building area, highlighting various waste storage locations and groundwater contamination plumes. Key features include:
- Waste Storage:**
 - DUF₆ Storage (~21,000 cylinders)
 - PCB Solid/RCRA Waste (multiple locations)
 - Groundwater Contamination:**
 - TCE Contaminated Groundwater (multiple plumes)
 - PCB Contaminated Groundwater
 - Five-Unit Area Plume
 - Seven-Unit Area Plume
 - X-749/120 Plume
 - X-740 Plume
 - X-701B Plume
 - Buildings and Structures:**
 - X-330 Process Building
 - X-333 Process Building
 - X-336 Process Building
 - X-749A
 - X-749/120
 - X-740
 - X-701B
 - X-749/120
 - X-749/120
 - X-749/120
 - Legend:**
 - Sump
 - Extraction Well
 - Groundwater Treatment Facility
 - Groundwater Plume
 - TCE Concentration (µg/L):
 - 5-100
 - 100-1,000
 - 1,000-10,000
 - 10,000-100,000
 - >100,000
 - Groundwater Pipe
 - Horizontal
 - Seep Collection System
 - Interceptor Trench
 - Slurry Wall
 - Containment Wall
 - Quadrant Boundary
 - Site Boundary
 - Scale:** 1000 ft.
 - Page Number:** 17

Cleanup Progress

4 groundwater facilities –
treating 26M gallons annually

10 Decision Documents
(4 since 2000)

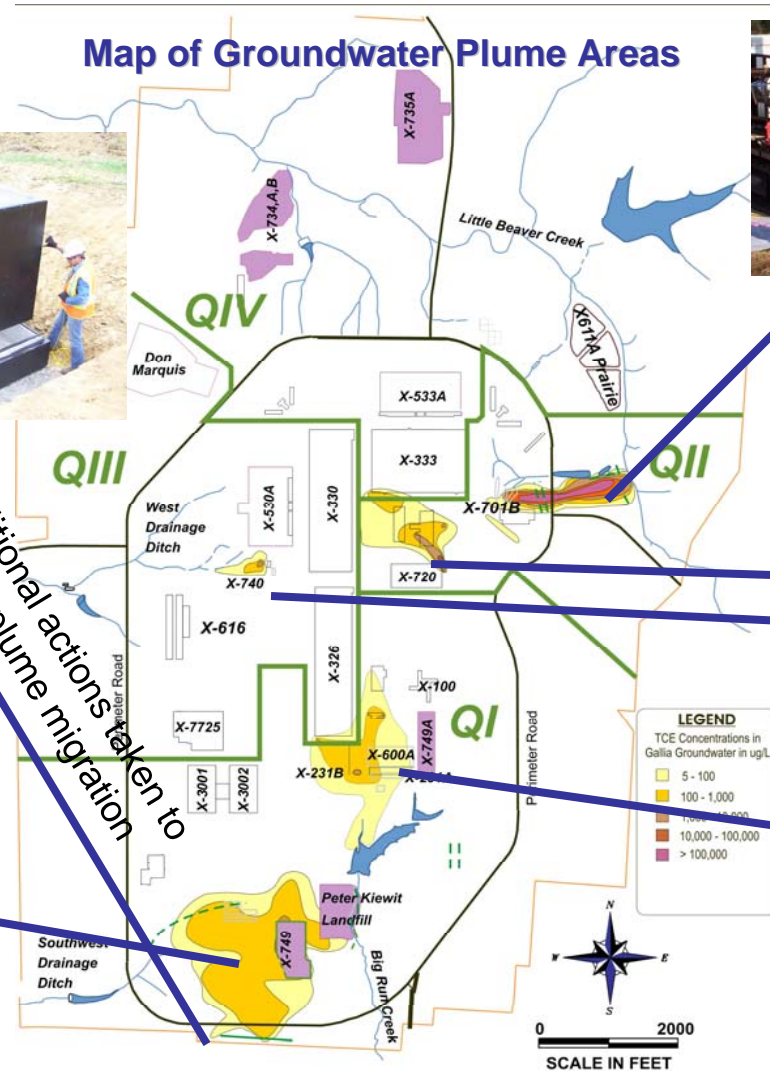
Treatments
implemented at all 5
groundwater plumes



3,000 hybrid poplar trees planted
for phytoremediation on south
end of plant 2002-2003

Additional actions taken to
address plume migration

Map of Groundwater Plume Areas



Oxidant injection
treatment implemented in
2005 at highest
trichloroethylene (TCE)
concentration plume;
Project completion in
2010

Potential for
supplemental
oxidant
treatment in
2008-2009

Plume being
managed by
13 extraction
wells

Current Site Permits

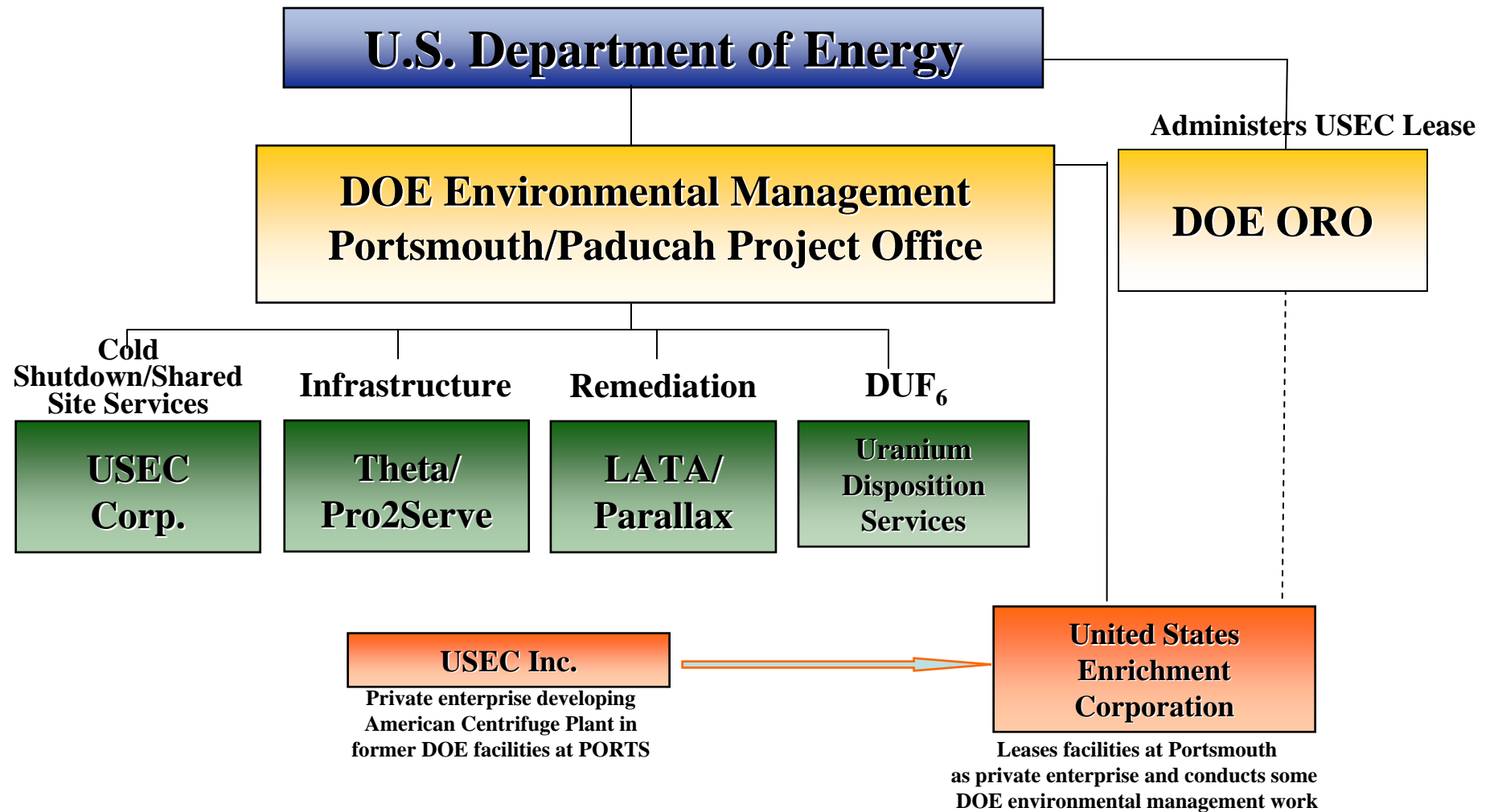
Media	Holder	Permit Type	Description	Signatory
Clear Air Act (CAA)	USEC	Title V Permit No. 0666000000	Incorporates all major sources of air pollution (i.e., boilers, generators, etc.)	OEPA
CAA	USEC	ACP Boiler #3 PTI Application No. 06-08290	Draft PTI issued for ACP Boiler #3	OEPA
CAA	USEC	Permit to Open Burn No. OB-06-66-73	Permission to open burn for instruction in methods of fire fighting and research in the control of fires	OEPA
CAA	UDS	Air Emissions Permit to Install (PTI)	Permit No. 06-07388 issued to UDS 10/5/04, Mod issued 3/29/07	OEPA
CAA	UDS	NESHAPs Authorization		USEPA
CAA	UDS	Air Emissions Permit to Operate (PTO)	Scheduled for 6 months post start of conversion operations	OEPA
CAA	LPP	Permit to Install – P474, T104, T105	X-627 Groundwater Treatment Facility	OEPA
CAA	LPP	Permit to Operate – P022	X-326 L-cage Glove Box	OEPA
CAA	LPP	Permit to Operate – P019	X-624 Groundwater Treatment Facility	OEPA
CAA	LPP	Permit to Operate – P023	X-735 Landfill Cap and Venting System (northern portion)	OEPA
CAA	LPP	Permit to Operate – P007	X-744G Glove Box	OEPA
CAA	LPP	Registered Source – T005	X-345 Security Fuel Oil Tank	OEPA
CAA	LPP	Registered Source – P018	X-623 Groundwater Treatment Facility	OEPA
CAA	LPP	Registered Source – P027	X-749 Contaminated Materials Disposal Facility	OEPA
CAA	LPP (TPMC)	Permit to Operate – B007, B008 *To be leased to USEC	X-6002 Recirculating Hot Water Plant North Boiler and South Boiler	OEPA
Clean Water Act (CWA)	USEC	NPDES Permit No. OH0115401	Authorization to discharge under the National Pollutant Discharge Elimination System	OEPA



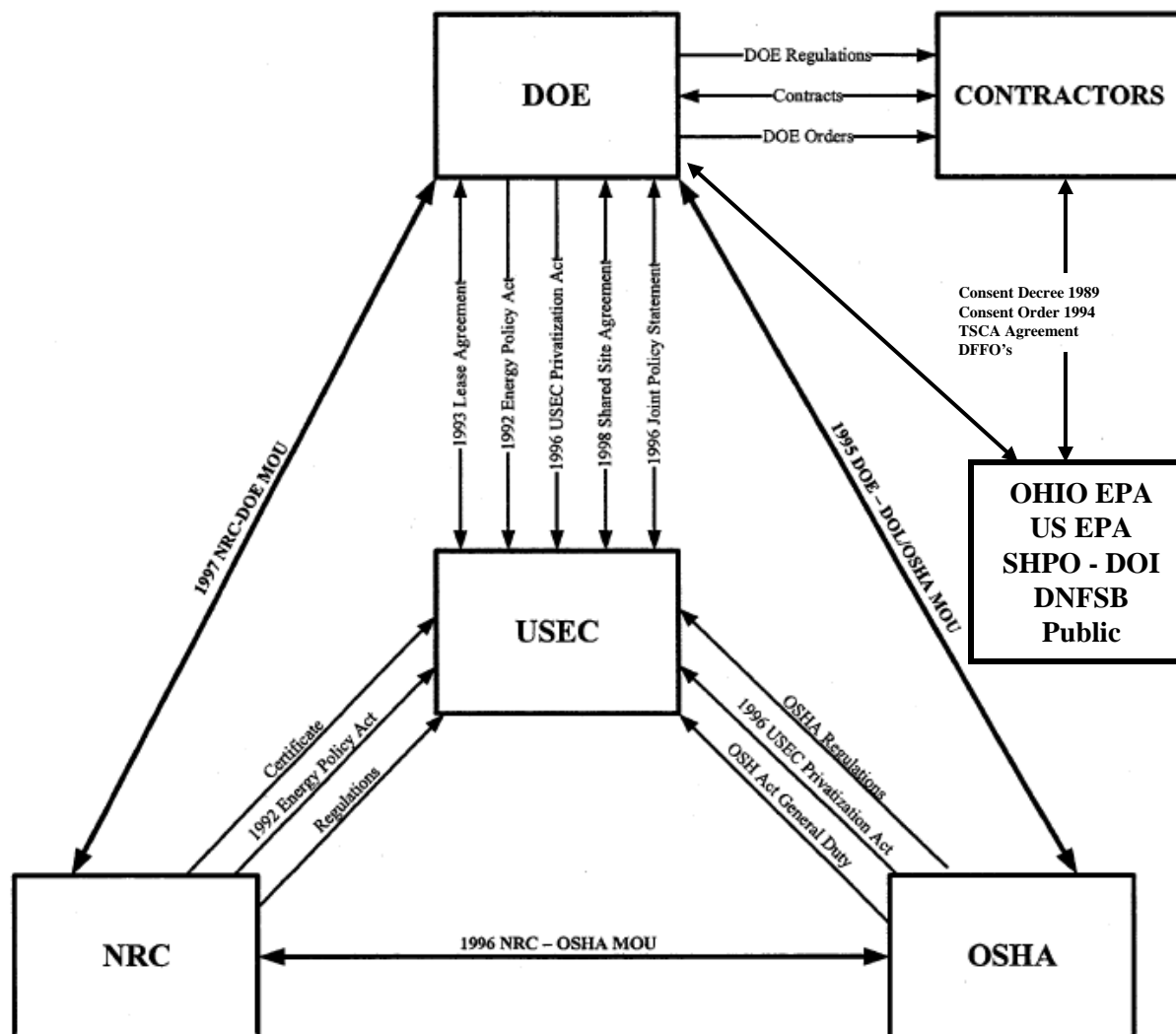
Current Site Permits (cont'd)

Media	Holder	Permit Type	Description	Signatory
CWA	USEC	PWS 6632414	License to operate or maintain a Public Water System	OEPA
CWA	UDS	Construction Stormwater Permit	Permit OHC000002	OEPA
CWA	UDS	Sewer Line PTI	Permit 06-7612	OEPA
CWA	UDS	Industrial Wastewater PTI and NPDES Permit	Permit OIS00034*AD	OEPA
CWA	UDS	Non-contact Cooling Water Additives Approval		OEPA
CWA	LPP	Permit OIO00000	NPDES Permit	OEPA
CWA	LPP	Permit to Install – 06-2951	X-622 Groundwater Treatment Facility	OEPA
CWA	LPP	Permit to Install – 06-3528	X-623 Groundwater Treatment Facility	OEPA
CWA	LPP	Permit to Install – 06-3556	X-624 Groundwater Treatment Facility	OEPA
CWA	LPP	Permit to Install – 06-5733	X-625 Groundwater Treatment Facility	OEPA
CWA	LPP	Permit to Install – 06-07283	X-627 Groundwater Treatment Facility	OEPA
CWA	LPP	Permit to Install – 06-6658 *To be leased to USEC	X-6002 Particulate Separator	OEPA
CWA	LPP	Permit to Install – 608398	Southern Boundary Hydraulic Containment Project	Ohio EPA
Waste	USEC	Utah Generator Site Access Permit No. 0111000043	Permit allows USEC to dispose of waste in the State of Utah at Envirocare	Utah
Waste	UDS	Hazardous Waste Generator Registration		OEPA
Waste	DOE and LPP	RCRA Part B Permit	Permit No. 04-66-0680	OEPA
Underground Storage Tank (UST)	USEC (leased from DOE)	UST Registration No. W005106	Seven underground storage tanks (UST) registered with Ohio Department of Commerce - Fire Marshall's Office by DOE and leased to USEC	ODOC/Fire Marshall's Office

EM Integrator Role Today



Complex Regulatory Interface



Workforce

- **Approximately 1900**
 - Represented workforce
 - Non-Represented workforce
- **Current Collective Bargaining Agreements**

D&D Project Overview



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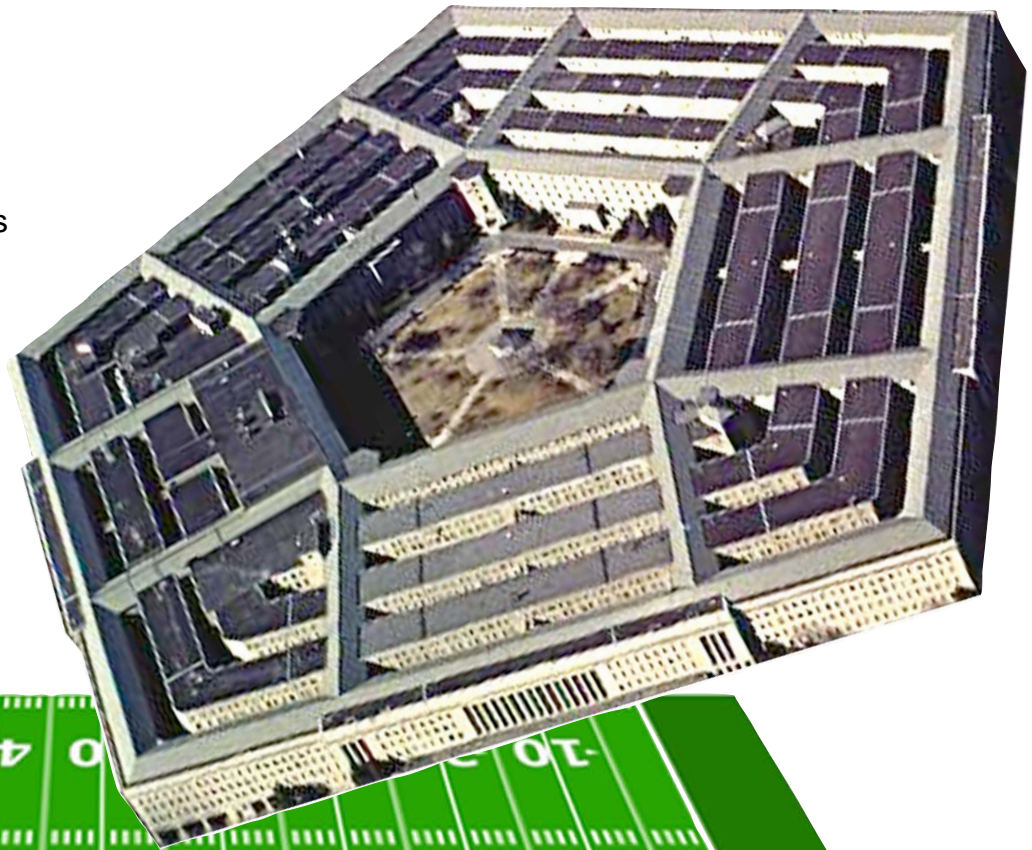
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Magnitude of the D&D Project

- Total sq footage of all 135 facilities is more than 10 million sq feet, equal to 2 Pentagons – largest in DOE complex
- Over 8 million sq feet of **Category 2** nuclear facilities
- 3 GDP process buildings are the size of 158 football fields
- Site-wide cleanup, including 41 “Deferred Units” under and around GDP Facilities
- Cost Range \$5B-\$12B over 44 years
- Total 2008 site employment: 1,900 workers



D&D Project Management Milestones

- **Mission Need (CD-0) Approved 10/07/2005**
 - Portsmouth Gaseous Diffusion Plant process equipment removal, building demolition, contaminated soil and groundwater characterization and remediation, and project waste disposal.
- **Alternative Selection and Cost Range (CD-1) Approved 8/17/2007**
 - Approved Acquisition Strategy
 - Cost range \$5B-\$12B
 - Clean-up project completion range FY 2044-2052
 - Assume Future Land-Use is Industrial Re-Use
- **Execute GDP D&D Project (CD-2/3) Next Step**
 - Currently planning projectization

Overall D&D Project Requirements

- Deactivation of equipment, including removal of pyranol transformer oils, lubrication oils, lubrication oils and residual hold-up deposits of uranium in process equipment
- Dismantlement and disposal of all gaseous diffusion equipment and facilities
- Dismantlement and disposal of all ancillary facilities, utilities, and infrastructure that were associated with the gaseous diffusion mission
- Environmental investigation and remediation of soil and groundwater contamination
- Waste Disposition – current project estimate assumes on-site disposal

Preliminary Estimated D&D Waste Quantities

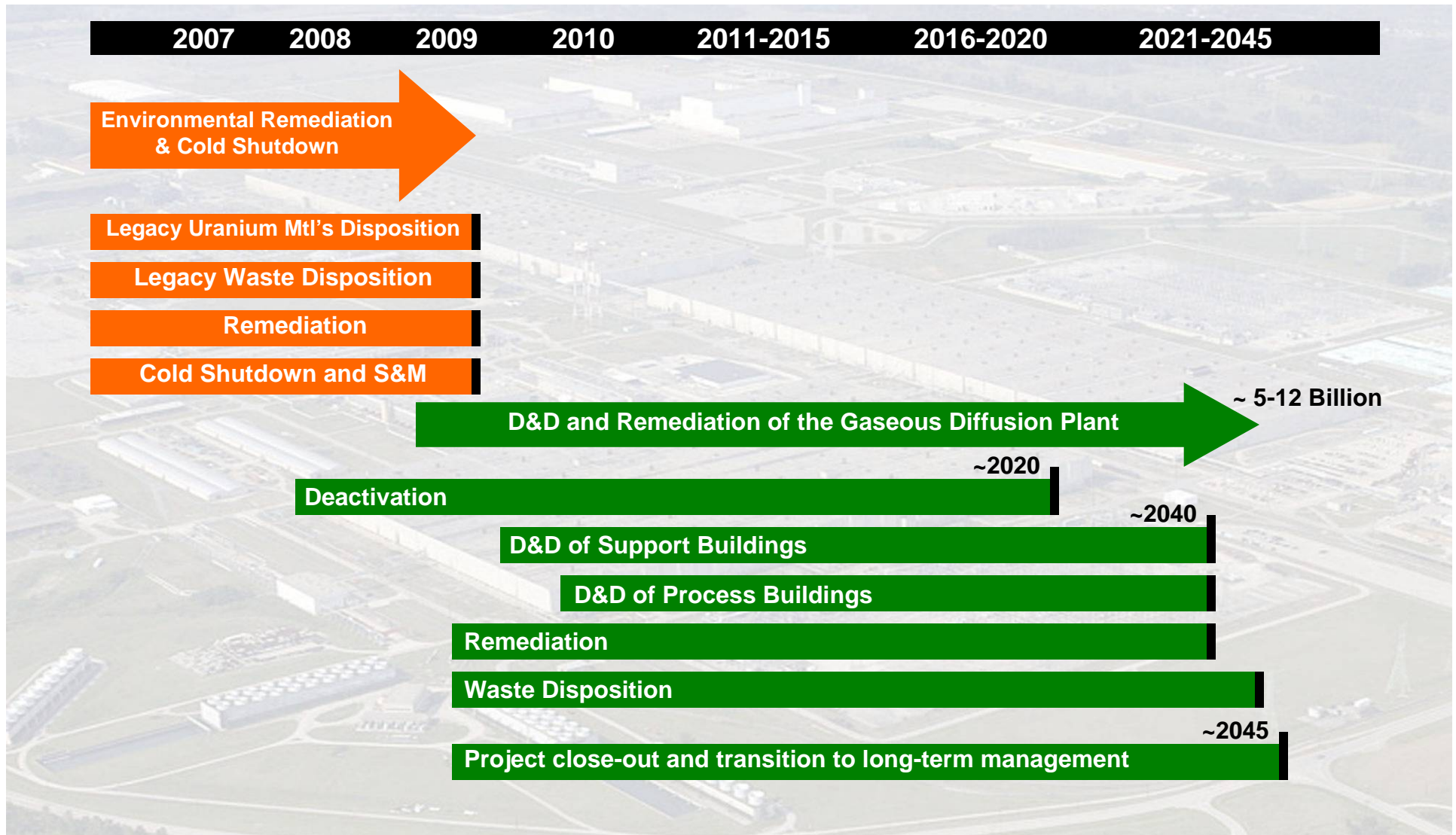
Preliminary D&D Waste Sources	Estimated Waste Quantity	Size Comparison
D&D Waste	1,700,000 m ³	54,000 railroad cars making a 500-mile long train stretching from Portsmouth to Washington, DC
Remedial Action Waste	450,000 m ³ of soils	13,000 railroad cars making a 123-mile long train
Total Number of Buildings/ Square Footage	134/10,600,000 ft ²	Twice the space of the Pentagon or six times the space of the Forrestal Building
Electrical Wiring	4,600 miles	Would stretch from Portsmouth to the Pacific Ocean and back
Process Piping	600 miles	Would stretch from Portsmouth to the Atlantic Ocean

Portsmouth Cleanup

Preparing for D&D of Gaseous Diffusion Plant

Current

D&D Project Execution



Acquisition Strategy

Key Planning Considerations

- Department requirements
- Safety of our workers and the public
- Effective project/contract execution
- Dynamic turnover/transition of GDP facilities and site services from USEC - Lease terms
- Day-to-day operations continuity
- Workforce impacts
- Fair competition
- Small business participation
- Defense Nuclear Facility Safety Board safety and integration concerns
- Stakeholder input

EM Acquisition Approach

- **Competitively procure all EM requirements**
- **Initial 3 contract approach**
 - Environmental Technical Services/ ~\$5-10M Annual Funding Available
 - Small Business Targeted T&M, GSA Schedule
 - Three-year base, two one-year options
 - D&D Management & Integration/ ~\$100-175M Annual Funding Available
 - Unrestricted, CPAF
 - Five-year base, potential five-year option
 - Infrastructure/ ~\$20-50M Annual Funding Available
 - Small Business Set-Aside, CPAF
 - Five-year base
- **Retain GDP S&M services until new D&D M&I award to ensure most beneficial transition**

Anticipated Schedule

- **Environmental Technical Services** - Five GSA vendors have submitted Intent to Bid. RFQ expected to be released during week of March 31, 2008.
- **Management & Integration** – RFP release in Jul/Aug 2008. Award in Jul/Aug 2009.
- **Infrastructure** – Pre-proposal conference in Nov/Dec 2008. RFP release in Feb/Mar 2009. Award in Jan/Feb 2010.

Proposed M&I Requirements

Proposed Scope

- D&D project presents a new set of requirements
- A large volume of minimum landlord responsibilities and surveillance and maintenance activities are being returned from USEC commercial operations to DOE
- The M&I contractor will have overall D&D Project Management and Integration responsibility, which includes overall planning, and the following:
 - Site-wide environmental investigation, characterization and remediation
 - Waste management planning and disposition
 - S&M and D&D of approximately 40 initial facilities, including one large process building X-333
 - Management and disposition of DOE nuclear materials
 - Regulator and stakeholder involvement

Initial Phase of Facilities

Facility No.	Facility Name	Deferred Unit (Yes or No)	Leased Facility (Yes or No)	Current Contractor Responsibilities
X-230J4	Environmental Air Sampling Station	No	No	LPP
X-334	Transformer Cleaning & Storage	No	No	LPP
X-345	SNM Storage Bldg	No	No	LPP
X-622	South Groundwater Treatment Facility	No	No	LPP
X-623	North Groundwater Treatment Building	No	No	LPP
X-624	Little Beaver Groundwater Treatment Facility	No	No	LPP
X-624-1	Little Beaver Grundwtr Trtmnt Decon Bldg	No	No	LPP
X-625	Groundwater Passive Treatment Facility	No	No	LPP
X-627	Groundwater Pump and Treat	No	No	LPP
X-701E	Neutralization Bldg	No	No	LPP
X-705E	Oxide Conversion "E" Area	No	No	LPP
X-744G	Bulk Storage Building	No	No	LPP
X-744S	Warehouse S Non-UEA	No	No	LPP
X-752	Warehouse	No	No	LPP
X-752 AT 1-6	Trailer Complex	No	No	LPP



Initial Phase of Facilities (Cont'd)

Facility No.	Facility Name	Deferred Unit (Yes or No)	Leased Facility (Yes or No)	Current Contractor Responsibilities
X-333	Process Bldg	Yes	Yes	USEC Corp
X-533	Switch Yard	Yes	Yes	USEC Corp
X-533A	Switch Yard	Yes	Yes	USEC Corp
X-533B	Switch House	Yes	Yes	USEC Corp
X-533C	Test And Repair Bldg	Yes	Yes	USEC Corp
X-533D	Oil House	Yes	Yes	USEC Corp
X-533E	Valve House	Yes	Yes	USEC Corp
X-533F	Valve House	Yes	Yes	USEC Corp
X-533H	Gas Reclaim. Cart Garage	Yes	Yes	USEC Corp
X-533T-1	Office Trailer	Yes	Yes	USEC Corp
X-630-1	Recir. Water Pump House	Yes	Yes	USEC Corp
X-630-2A	Cooling Tower	Yes	Yes	USEC Corp
X-630-2B	Cooling Tower	Yes	Yes	USEC Corp
X-630-3	Acid Handling Station	Yes	Yes	USEC Corp
X-633-1	Recir. Water Pump House	Yes	Yes	USEC Corp
X-633-2A	Cooling Tower	Yes	Yes	USEC Corp
X-633-2B	Cooling Tower	Yes	Yes	USEC Corp
X-633-2C	Cooling Tower	Yes	Yes	USEC Corp
X-633-2D	Cooling Tower	Yes	Yes	USEC Corp
X-747	Clean Scrap Yard	No	Yes	USEC Corp
X-760	Chemical Engineering Bldg	No	Yes	USEC Corp



Transition

- **Proposed initial 90-day transition**
- **Complexities**
 - Workforce transition, including hiring
 - Transition and/or implementation of pension and benefit plans
- **EM goal is an effective transition that minimizes the impact to the current workforce**

Conclusion

- Thank you for your interest in the Portsmouth D&D project and taking the time to attend today's briefing.
- Questions may be dropped off at sign-in table or through the official website at www.emcbc.doe.gov/pppo_main_site.
- For additional technical information, please visit our DOE Environmental Information Center in the OSU Endeavor Center, Room 220, located at 182 Shyville Road, Piketon, OH, 45661.

Site Tour Information

- **Arrive at the Endeavor Center for safety and security processing by 8:30 am for morning tour, and 12:30 pm for afternoon pm tour.**
 - *Bus leaves Endeavor Center promptly at 9:00 am for morning tour and 1:00 pm for afternoon tour*
 - *Maps to the Endeavor Center are available at the Site Tour registration table in front*
- **Tour lasts approximately three hours**
- **Bring photo ID - you must be a US citizen to attend the tour**
- **Wear proper attire**
 - *Comfortable clothing and shoes*
 - *No sandals or high heels*
- **Secure prohibited items in your vehicle**
 - *Firearms or dangerous weapons, drugs and paraphernalia (other than prescription), alcohol, photographic equipment, laptop computers, cell phones, blackberries, PDAs, computer associated equipment (thumb drives, CDs, MP3s, etc.)*

STAY WITH YOUR ESCORT WHILE ON-SITE



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